

**4. KR2003-0034260**

- (1) Status: Patent registered
- (2) Title: VOICE ACTIVITY DETECTION APPARATUS AND METHOD THEREOF IN MOBILE COMMUNICATION SYSTEM
- (3) Applicant: Electronics and Telecommunications Research Institute
- (4) Abstract

A voice activity detection apparatus and a method thereof in a mobile communication system are provided to distinguish a voice section from a background noise section efficiently while taking over the telephone existing the background noise by using peak measurement (PM) of a residual signal of an LPC (Linear Prediction Coefficient).

An LPC analyzer (101) receives and analyzes an input voice signal applied, and then extracts an LPC. An LPC mixer (102) reproduces the voice signal from the LPC. An adder (103) adds up the input voice signal and deducts the signal received from the LPC mixer (102) to produce an LPC residual signal. A PM calculating device (104) performs a PM by using the LPC residual signal. A first flag determining device (105) determines a flag by using the value of PM received from the PM calculating device (104). An analysis and flag determining unit analyzes frame energy and characteristic and distribution of frequency and then determines a flag. A VAD (Voice Activity Detection) device (112) determines a VAD by using a flag received from the analysis and flag determining unit.